

## EAST Search History

| Ref # | Hits  | Search Query  | DBs  | Default Operator | Plurals | Time Stamp       |
|-------|-------|---|--|------------------|---------|------------------|
| L1    | 165   | 704/227.ccls.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | OFF     | 2007/06/08 07:15 |
| L2    | 33608 | (harmonic\$1 or speech) same noise                                | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | OFF     | 2007/06/08 07:57 |
| L3    | 15564 | I2 and noise with (suppress or reduc\$4 or eliminat\$3 or cancel) | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | OFF     | 2007/06/08 07:58 |
| L4    | 2022  | I3 and "704".clas.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | OFF     | 2007/06/08 07:58 |
| L5    | 407   | I4 and 704/226.ccls.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | OFF     | 2007/06/08 07:59 |
| L6    | 49    | I5 and mel  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | OFF     | 2007/06/08 08:17 |
| L7    | 98    | I4 and 704/228.ccls.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | OFF     | 2007/06/08 08:17 |

## EAST Search History

|     |      |   |  |    |    |                  |
|-----|------|---|--|----|----|------------------|
| L8  | 2    | "6029128".pn.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L9  | 362  | (decompos\$3 or separate or split)<br>same (speech or harmonic) near<br>signal same parameter | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L10 | 253  | L9 and "704".clas.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L11 | 27   | L10 and sinusoid\$1   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L12 | 89   | mel adj cepstral  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L13 | 86   | L12 and speech  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L14 | 1445 | harmonic\$1 same noise same<br>reduction  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |

## EAST Search History

|     |      |   |  |    |    |                  |
|-----|------|---|--|----|----|------------------|
| L15 | 0    | L14 and (mel and cepstrum)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L16 | 596  | signal adj decomposition  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L17 | 54   | L13 and noise   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L18 | 359  | (harmonic or voice or speech)<br>same noise same (decompose or<br>separate or split) and (sinusoid\$1<br>or exponential\$1) | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L19 | 3053 | (decompos\$3 or separate or split)<br>same (speech or harmonic) near<br>signal  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L20 | 15   | L16 same (cos or cosine) and (sin<br>or sine) and speech and random   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L21 | 4    | harmonic same noise same<br>decompose and sinusoids   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |

## EAST Search History

|     |     |  |  |    |    |                  |
|-----|-----|--|--|----|----|------------------|
| L22 | 12  | harmonic same noise same decompose               | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L23 | 0   | harmonic same noise same paramter same decompose | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L24 | 2   | EP-899718-\$ did.                                | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L25 | 142 | L16 and cos\$3 and sin\$1                        | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L26 | 0   | "10647586"                                       | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L27 | 13  | L17 and harmonic                                 | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L28 | 11  | L14 and mel                                      | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |

## EAST Search History

|     |     |   |  |    |    |                  |
|-----|-----|---|--|----|----|------------------|
| L29 | 128 | L16 and (cos or cosine) and (sin or sine)                       | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L30 | 1   | "10/647586"   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L31 | 15  | L16 same (cos or cosine) and (sin or sine) and speech and noise | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L32 | 62  | L16 and (cos or cosine) and (sin or sine) and speech and noise  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L33 | 21  | "harmonic plus noise"   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L34 | 436 | energy same harmonic same noise same ratio                      | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L35 | 51  | L34 same speech   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |

## EAST Search History

|     |     |  |  |    |    |                  |
|-----|-----|--|--|----|----|------------------|
| L36 | 34  | speech same recognition same system same harmonic same (random or noise) | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L37 | 461 | mel same cepstral same frequency same coefficient\$1                     | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L38 | 2   | "20050071160"  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L39 | 3   | harmonic same "mel spectrum"   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L40 | 235 | 704/228.ccls.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L41 | 16  | L40 and mel  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L42 | 27  | "mel spectrum"   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |

## EAST Search History

|     |        |  |  |    |    |                  |
|-----|--------|--|--|----|----|------------------|
| L43 | 796    | 704/226.ccls.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L44 | 2      | "20010018655"  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L45 | 0      | "signal\$1to\$1noise\$1ratio"  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L46 | 143244 | signal same noise same ratio   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L47 | 129608 | signal with noise with ratio   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L48 | 8      | ("4628529"   "4811404"  <br>"5604839"   "5655057"  <br>"5960395"   "6098040"  <br>"6230122"   "6542864").PN. | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON | 2007/06/08 10:24 |
| L49 | 2      | "6965860".pn.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |

## EAST Search History

|     |        |                                  |  |    |    |                  |
|-----|--------|----------------------------------|--|----|----|------------------|
| L50 | 84     | harmonics with signal adj ratio  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L51 | 4      | L50 and "704".clas.              | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L52 | 129608 | noise with signal with ratio     | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L53 | 2410   | L52 same speech                  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L54 | 974    | L53 and "704".clas.              | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L55 | 55     | harmonics with speech with ratio | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |
| L56 | 22198  | noise adj3 signal with ratio     | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/08 10:24 |

## EAST Search History

|     |      |                                       |  |    |     |                  |
|-----|------|---------------------------------------|--|----|-----|------------------|
| L57 | 4    | harmonics adj signal adj ratio        | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2007/06/08 10:24 |
| L58 | 0    | harmonics adj to adj signal adj ratio | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2007/06/08 10:24 |
| L59 | 2    | "6029128".pn.                         | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2007/06/08 10:24 |
| L60 | 642  | L56 same speech                       | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2007/06/08 10:24 |
| L61 | 304  | L60 and "704".clas.                   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2007/06/08 10:24 |
| L62 | 1062 | 704/226,227,228.ccls.                 | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2007/06/08 10:24 |
| S1  | 2    | "6029128".pn.                         | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2006/12/19 15:58 |

## EAST Search History

|    |      |                                       |  |    |    |                  |
|----|------|---------------------------------------|--|----|----|------------------|
| S2 | 1395 | harmonic\$1 same noise same reduction | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 13:29 |
| S4 | 0    | S2 and (mel and cepstrum)             | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 13:30 |
| S5 | 8    | S2 and mel                            | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 13:32 |
| S6 | 78   | mel adj cepstral                      | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 13:33 |
| S7 | 76   | S6 and speech                         | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 13:33 |
| S8 | 46   | S7 and noise                          | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 13:33 |
| S9 | 10   | S8 and harmonic                       | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 13:35 |

## EAST Search History

|     |     |  |  |    |    |                  |
|-----|-----|--|--|----|----|------------------|
| S10 | 0   | harmonic same noise same paramter same decompose   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 13:36 |
| S11 | 11  | harmonic same noise same decompose   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 13:38 |
| S12 | 4   | harmonic same noise same decompose and sinusoids   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 13:38 |
| S13 | 344 | (harmonic or voice or speech) same noise same (decompose or separate or split) and (sinusoid\$1 or exponential\$1) | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 13:46 |
| S14 | 562 | signal adj decomposition   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 13:46 |
| S15 | 135 | S14 and cos\$3 and sin\$1  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 13:48 |
| S16 | 122 | S14 and (cos or cosine) and (sin or sine)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 13:50 |

## EAST Search History

|     |      |   |  |    |    |                  |
|-----|------|---|--|----|----|------------------|
| S17 | 58   | S14 and (cos or cosine) and (sin or sine) and speech and noise                          | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 13:50 |
| S18 | 15   | S14 same (cos or cosine) and (sin or sine) and speech and noise                         | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 14:06 |
| S19 | 15   | S14 same (cos or cosine) and (sin or sine) and speech and random                        | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 14:24 |
| S23 | 2    | EP-899718-\$ did.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/20 10:36 |
| S24 | 2945 | (decompos\$3 or separate or split) same (speech or harmonic) near signal                | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 15:08 |
| S25 | 348  | (decompos\$3 or separate or split) same (speech or harmonic) near signal same parameter | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 15:09 |
| S26 | 242  | S25 and "704".clas.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 15:09 |

## EAST Search History

|     |     |  |  |    |    |                  |
|-----|-----|--|--|----|----|------------------|
| S27 | 25  | S26 and sinusoid\$1  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 15:09 |
| S28 | 0   | "10647586"   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 15:58 |
| S29 | 1   | "10/647586"  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/01/03 08:25 |
| S30 | 20  | "harmonic plus noise"  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/19 16:49 |
| S31 | 34  | speech same recognition same<br>system same harmonic same<br>(random or noise) | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/20 12:28 |
| S32 | 428 | energy same harmonic same noise<br>same ratio                                  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/20 12:30 |
| S33 | 47  | S32 same speech  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/20 14:54 |

## EAST Search History

|     |     |   |  |    |    |                  |
|-----|-----|---|--|----|----|------------------|
| S34 | 412 | mel same cepstral same frequency<br>same coefficient\$1 | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/21 09:33 |
| S35 | 2   | "20050071160"   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/21 10:57 |
| S36 | 3   | harmonic same "mel spectrum"                            | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/21 11:10 |
| S37 | 26  | "mel spectrum"  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/21 13:14 |
| S38 | 228 | 704/228.ccls.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/21 13:16 |
| S39 | 13  | S38 and mel   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2006/12/21 13:16 |
| S40 | 763 | 704/226.ccls.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/01/03 08:25 |

## EAST Search History

|     |        |  |  |    |    |                  |
|-----|--------|--|--|----|----|------------------|
| S41 | 2      | "20010018655"  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/01/25 11:24 |
| S42 | 0      | "signal\$1to\$1noise\$1ratio"  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/01/25 11:36 |
| S43 | 137421 | signal same noise same ratio   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/01/25 11:37 |
| S44 | 124192 | signal with noise with ratio   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/01/25 11:39 |
| S45 | 2      | "6965860".pn.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/01/25 11:39 |
| S46 | 8      | ("4628529"   "4811404"  <br>"5604839"   "5655057"  <br>"5960395"   "6098040"  <br>"6230122"   "6542864").PN. | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON | 2007/01/25 11:41 |
| S47 | 0      | harmonics adj to adj signal adj<br>ratio   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/07 08:06 |

## EAST Search History

|     |        |                                  |  |    |    |                  |
|-----|--------|----------------------------------|--|----|----|------------------|
| S48 | 4      | harmonics adj signal adj ratio   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/07 08:06 |
| S49 | 84     | harmonics with signal adj ratio  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/07 08:07 |
| S50 | 4      | S49 and "704".clas.              | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/07 08:28 |
| S51 | 2      | "6029128".pn.                    | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/07 10:29 |
| S52 | 55     | harmonics with speech with ratio | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/07 10:47 |
| S53 | 129608 | noise with signal with ratio     | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/07 10:49 |
| S54 | 2410   | S53 same speech                  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2007/06/07 10:48 |

## EAST Search History

|     |       |                              |  |    |     |                  |
|-----|-------|------------------------------|--|----|-----|------------------|
| S55 | 974   | S54 and "704".clas.          | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2007/06/07 10:48 |
| S57 | 22198 | noise adj3 signal with ratio | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2007/06/07 10:49 |
| S58 | 642   | S57 same speech              | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2007/06/07 10:49 |
| S59 | 304   | S58 and "704".clas.          | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2007/06/07 11:31 |
| S66 | 1062  | 704/226,227,228.ccls.        | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2007/06/08 07:10 |